

IN THE CLAIMS

1. (Currently amended) A method for processing the data of a process, said method comprising:

(a) collecting a time series data of a time varying parameter of said process,
wherein said data is generated by a device;

(b) processing said time series data for categorization according to a data structure that includes a representation of said device and that defines said time varying parameter and an activity having an interval that frames said time varying parameter; and

(c) based on said data structure, storing said processed time series data in a memory.

2. (Original) The method of claim 1, wherein said data structure includes an activity structure that comprises an identity and a plurality of activity attributes.

3. (Original) The method of claim 2, wherein said activity attributes are selected from the group consisting of: start time, end time, time varying parameter and item used in said process.

4. (Currently amended) The method of claim 3, wherein at least one of said activity attributes ~~have~~has an attribute value.

5. (Currently amended) The method of claim 3, wherein said item is an equipment, and wherein said time series data is linked to a said device, which is a part of said equipment.

6. (Currently amended) A computer apparatus for processing the data of a process, said apparatus comprising:

a processor and a framing program that when run controls said processor:

~~means for collecting~~to receive a time series data of a time varying parameter of said process, wherein said data is generated by a device;

~~means for~~to processing said time series data for categorization according to a data structure that includes a representation of said device and that defines said time varying parameter and an activity having an interval that frames said time varying parameter; and

~~means for~~to storing said processed time series data based on said data structure.

7. (Currently amended) The computer apparatus of claim 6, wherein said data structure includes an activity structure that comprises an identity and a plurality of activity attributes.
8. (Currently amended) The computer apparatus of claim 7, wherein said activity attributes are selected from the group consisting of: start time, end time, time varying parameter and item used in said process.
9. (Currently amended) The computer apparatus of claim ~~8~~7, wherein at least one of said activity attributes ~~have~~has an attribute value.
10. (Currently amended) The computer apparatus of claim 8, wherein said item is an equipment, and wherein said time series data is linked to ~~a~~said device, which is a part of said equipment.
11. (Currently amended) A method for retrieving time series data of a process that is stored in a memory, said method comprising:

(a) identifying an activity of said process;

(b) identifying a time varying parameter of said time series data that is framed by an interval of said activity and a device that generated said time series data of said time varying parameter; and

(c) processing said activity, a representation of said device and said time varying parameter to access said memory to retrieve said time series data.

12. (Original) The method of claim 11, wherein said data structure includes an activity structure that comprises an identity and a plurality of activity attributes.

13. (Original) The method of claim 12, wherein said activity attributes are selected from the group consisting of: start time, end time, time varying parameter and item used in said process.

14. (Currently amended) The method of claim ~~13~~11, wherein at least one of said activity attributes ~~have~~has an attribute value.

15. (Currently amended) The method of claim 14, wherein said item is an equipment, and wherein said time series data is linked to ~~a~~said device, which is a part of said equipment.

16. (Original) The method of claim 11, wherein step (b) identifies said time varying parameter with a reference selected from the group consisting of: time based reference with respect to said interval, direct reference to said activity and indirect reference to said activity.

17. (Original) The method of claim 16, wherein said time based reference is with respect to a parameter that is independent of said process.

18. (Original) The method of claim 16, wherein said direct reference directly refers to said activity.

19. (Original) The method of claim 16, wherein said indirect reference includes a reference to an equipment used by said process during said activity.

20. (Currently amended) A computer apparatus for retrieving time series data of a process that is stored in a memory, said apparatus comprising:

a processor and a framing program that when run controls said processor:

~~first means for~~ to identifying an activity of said process;

~~second means for~~ to identifying a time varying parameter of said time series data that is framed by an interval of said activity and a device that generated said time series data of said time varying parameter; and

~~means for~~ to processing said activity, a representation of said device and said time varying parameter to access said memory to retrieve said time series data.

21. (Currently amended) The computer apparatus of claim 20, wherein said data structure includes an activity structure that comprises an identity and a plurality of activity attributes.

22. (Currently amended) The computer apparatus of claim 21, wherein said activity attributes are selected from the group consisting of: start time, end time, time varying parameter and item used in said process.

23. (Currently amended) The computer apparatus of claim 22, wherein at least one of said activity attributes ~~have~~has an attribute value.

24. (Currently amended) The computer apparatus of claim 23, wherein said item is an equipment, and wherein said time series data is linked to ~~a~~said device, which is a part of said equipment.

25. (Currently amended) The computer apparatus of claim 20, wherein said ~~means for identifying an time varying parameter identifies said time varying parameter~~ is identified with a reference selected from the group consisting of: time based reference with respect to said interval, direct reference to said activity and indirect reference to said activity.

26. (Currently amended) The computer apparatus of claim 25, wherein said time based reference is with respect to a parameter that is independent of said process.

27. (Currently amended) The computer apparatus of claim 25, wherein said direct reference directly refers to said activity.

28. (Currently amended) The computer apparatus of claim 25, wherein said indirect reference includes a reference to an equipment used by said process during said activity.

29. (Currently amended) A memory media for controlling a computer to retrieve time series data of a process that is stored in a memory, said memory media comprising:

program instructions of a framing program that ~~first means for controlling~~ said computer;

to perform a first operation to identify an activity of said process, wherein
said time series data is generated by a device;

~~second means for controlling said computer to perform a second operation to identify a time varying parameter of said time series data that is framed by an interval of said activity; and~~

~~third means for controlling said computer to perform a third operation to process said activity, a representation of said device and said time varying parameter to access said memory to retrieve said time series data.~~

30. (Currently amended) A memory media for controlling a computer to process the data of a process, said method comprising:

program instructions of a framing program that ~~first means for controlling said computer;~~

to perform a first operation to collect a time series data of a time varying parameter of said process, wherein said time series data is generated by a device;

~~second means for controlling said computer to perform a second operation to process said time series data according to a representation of said device and a data structure that defines said time varying parameter and an activity having an interval that frames said time series data; and~~

~~third means for controlling said computer~~ based on said device representation and said data structure, to perform a third operation to store said processed time series data in a memory.

31. (Currently amended) A method for processing time series data of a time varying parameter of a process, said method comprising:

(a) processing said time series data based on a representation of a device that generated said time series data and~~with~~ an activity that has an interval that frames said time series data; and

(b) processing said activity, device representation and said time varying parameter to access a memory to store and retrieve said time series data.

32. (Currently amended) A computer apparatus for processing time series data a time varying parameter of a process, said apparatus comprising:

a processor and a framing program that when run controls said processor:

~~first processing means for~~to processing said time series data based on a representation of a device that generated said time series data and~~with~~ an activity that has an interval that frames said time series data; and

~~second processing means for~~to processing said activity, said device representation and said time varying parameter to access a memory and store and retrieve said time series data.

33. (Currently amended) A memory media for controlling a computer to process time series data of a time varying parameter of a process, said memory media comprising:

program instructions of a framing program that ~~first means for controlling~~ said computer;

to perform a first operation to process said time series data based on a representation of a device that generated said time series data and ~~with an~~ activity that has an interval that frames said time series data; and

~~second means for controlling said computer~~ to perform a second operation to process said activity, said device representation and said time varying parameter to access said memory and store and retrieve said time series data.

34. (New) The method of claim 3, wherein said item comprises said representation of said device.

35. (New) The computer apparatus of claim 8, wherein said item comprises said representation of said device.

36. (New) The method of claim 13, wherein said item comprises said representation of said device.

37. (New) The computer apparatus of claim 22, wherein said item comprises said representation of said device.